Florida Reef Tract Coral Disease Outbreak: Update on Status and Response Efforts

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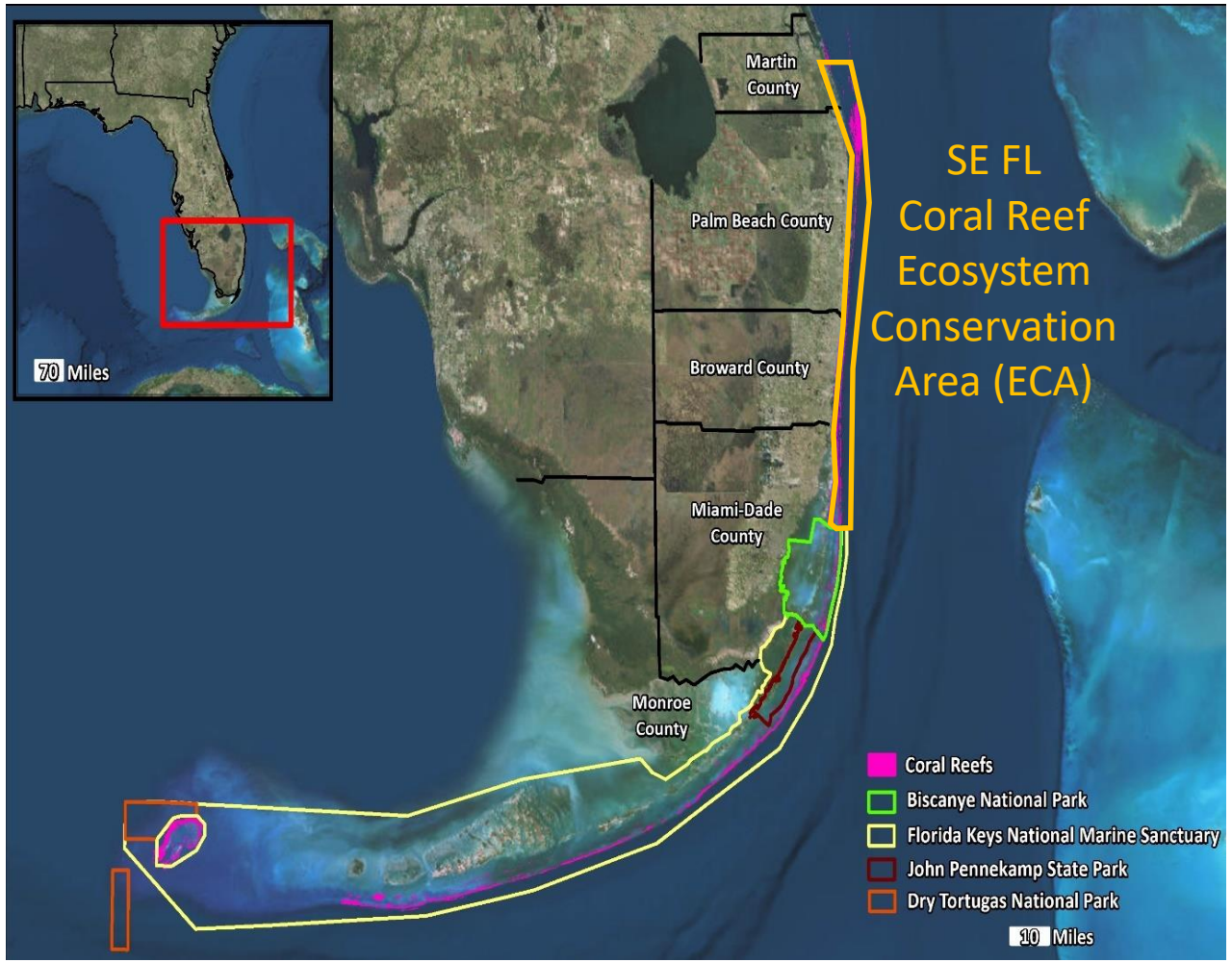
SE Regional Administrator

Oct. 17, 2018

DEP Florida Coastal Office

Florida's National Treasure

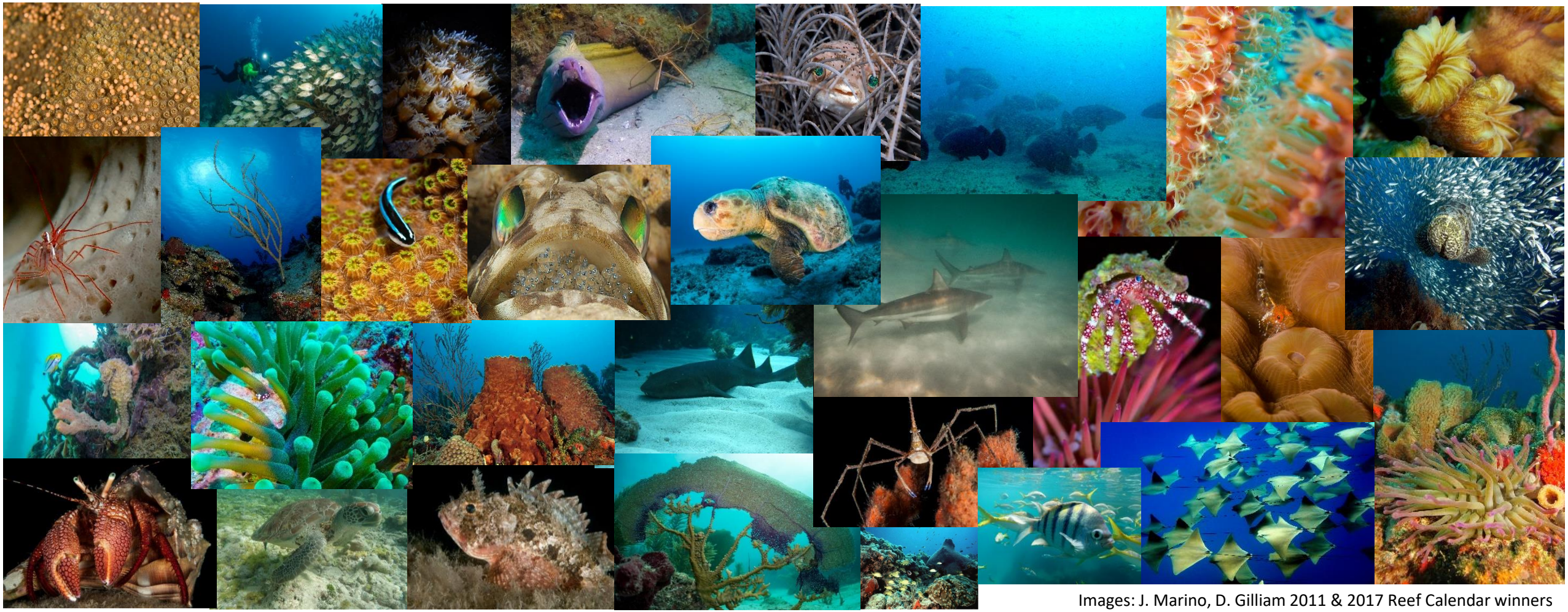
Florida Reef Tract



Images: DEP, D. Gilliam, NOAA

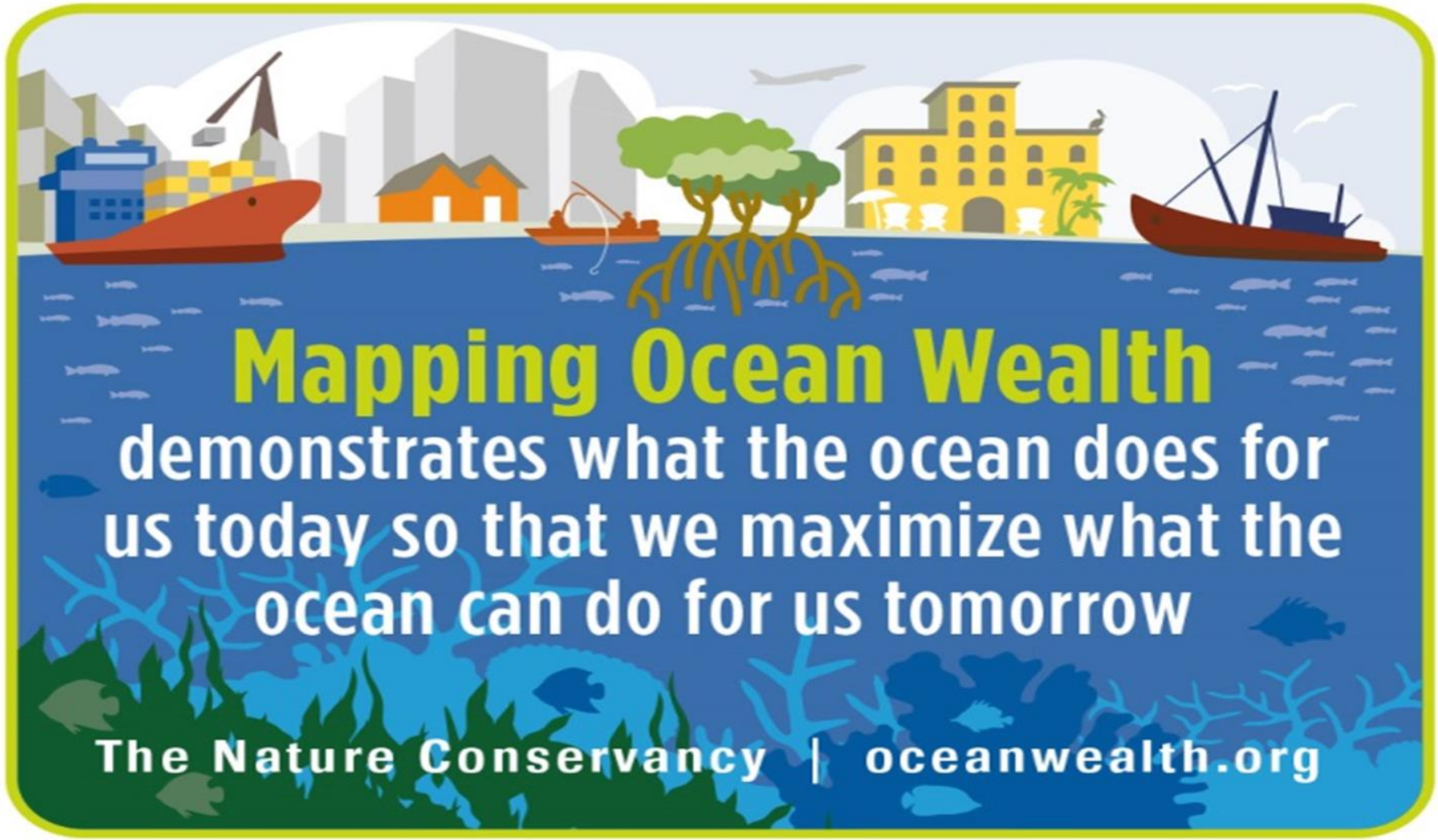
Florida's Natural Treasure

Florida Reef Tract



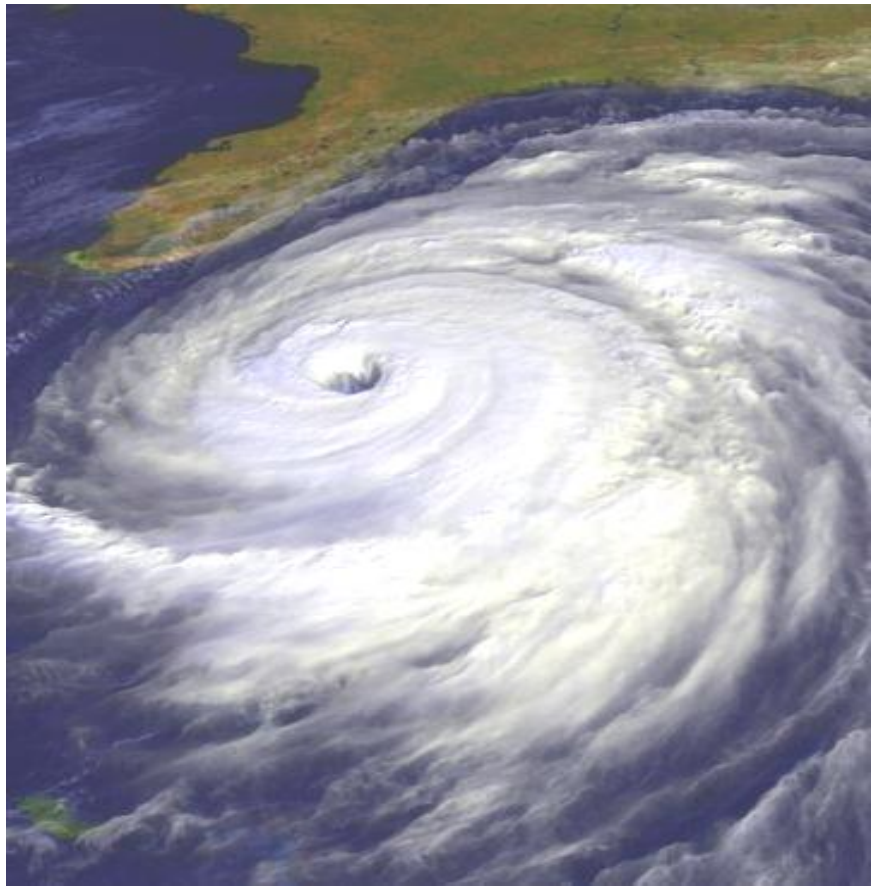
Images: J. Marino, D. Gilliam 2011 & 2017 Reef Calendar winners

Economically Essential



Economically Essential

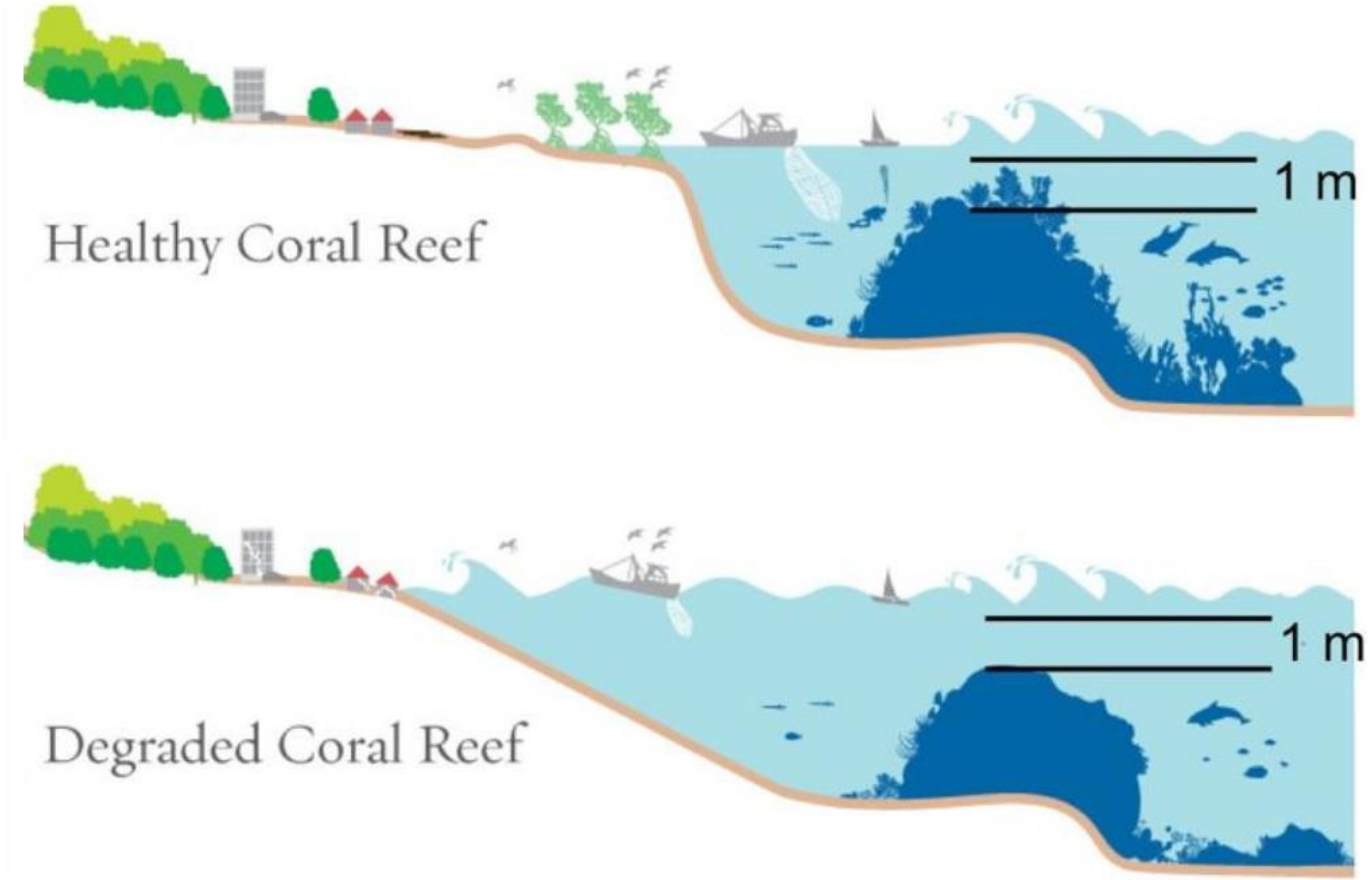
Coastal Protection

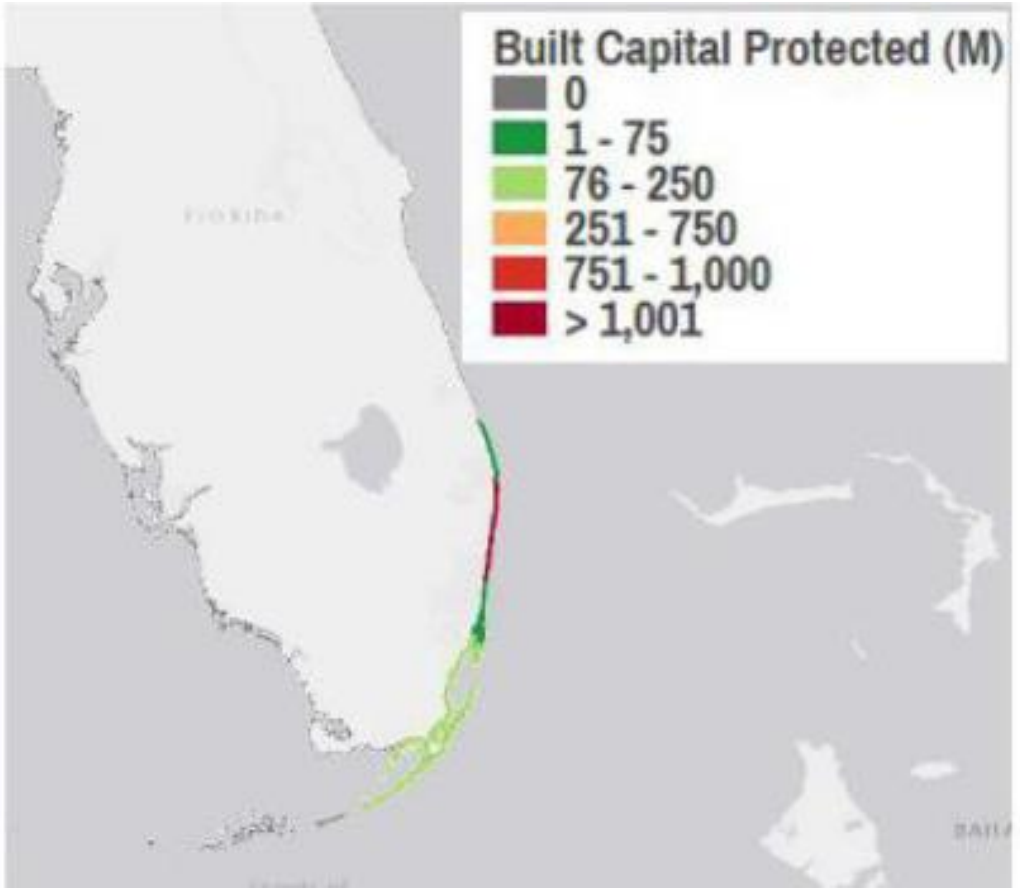


Photos By: Hal Pierce; Ken Banks

Economically Essential

Coastal Protection





Images from: Mapping Ocean Wealth

Economically Essential

Fisheries Habitat

Economically Essential

Biomedical & Drug Research

=

Economically Essential

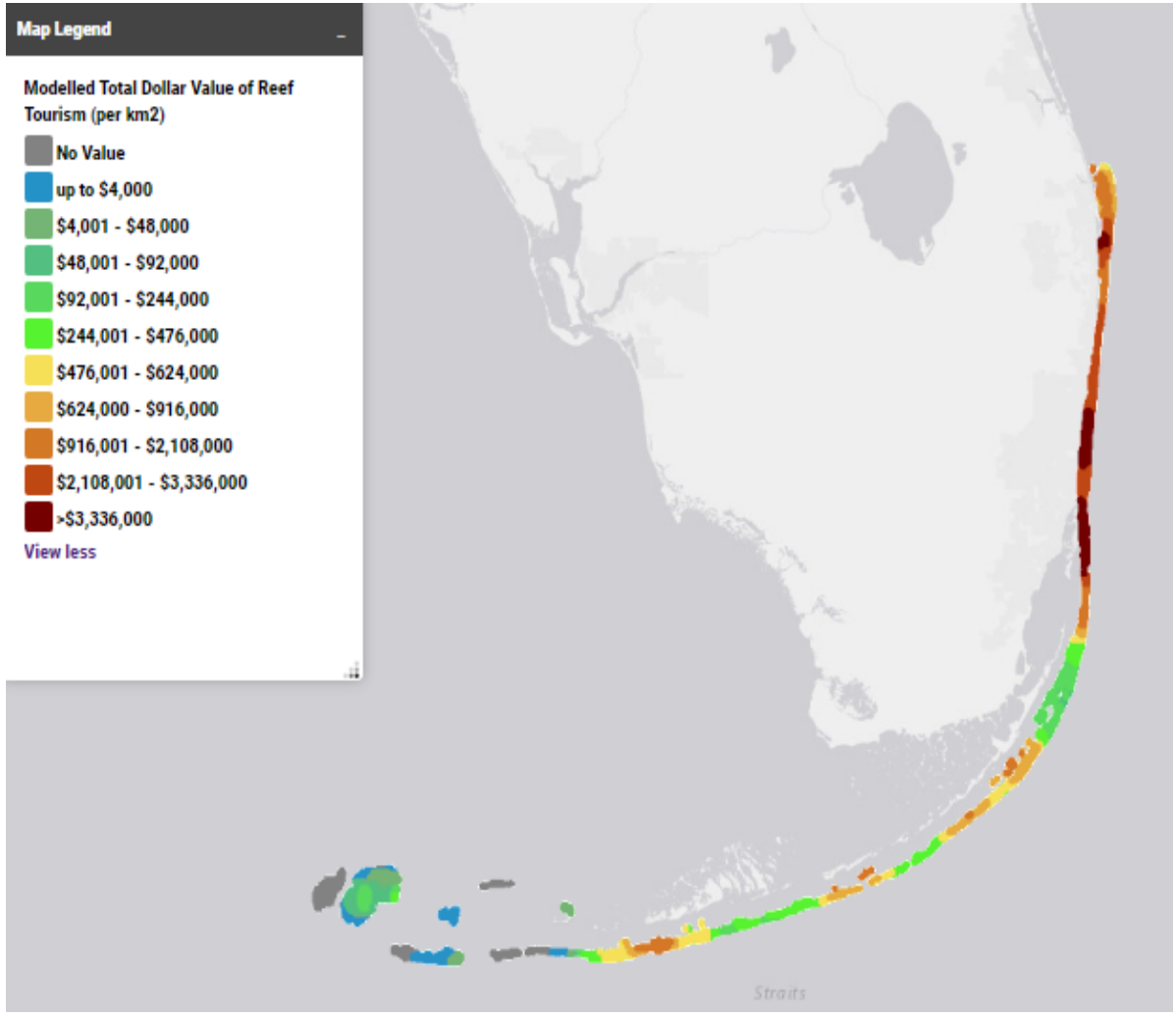
Tourism

Economically Essential

On Reef & Adjacent to Reef Tourism Value of Florida's Coral Reefs per Year (USD)

$1,152,313,000

According to The Nature Conservancy's Mapping Ocean Wealth



Economically Essential



Estimated to annually support **71,000 jobs** and generate **$6.3 billion in sales and income**

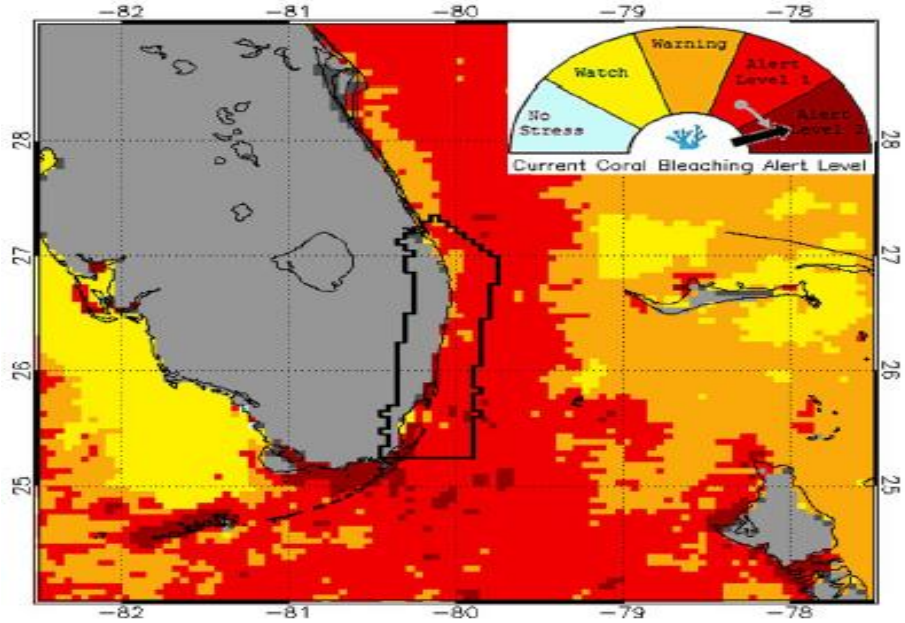
(Johns et al, 2001 & 2004)




Global Stressors

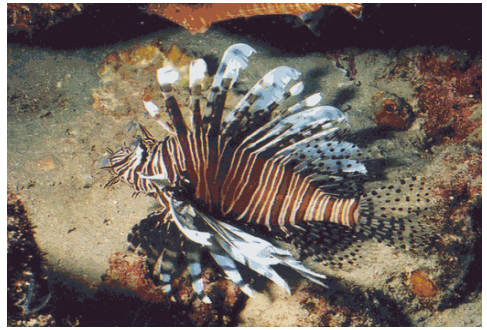
Increased frequency & severity of extreme thermal events

(hot & cold)



Ocean (& coastal) acidification

Local Stressors



Florida's Coral Disease Outbreak

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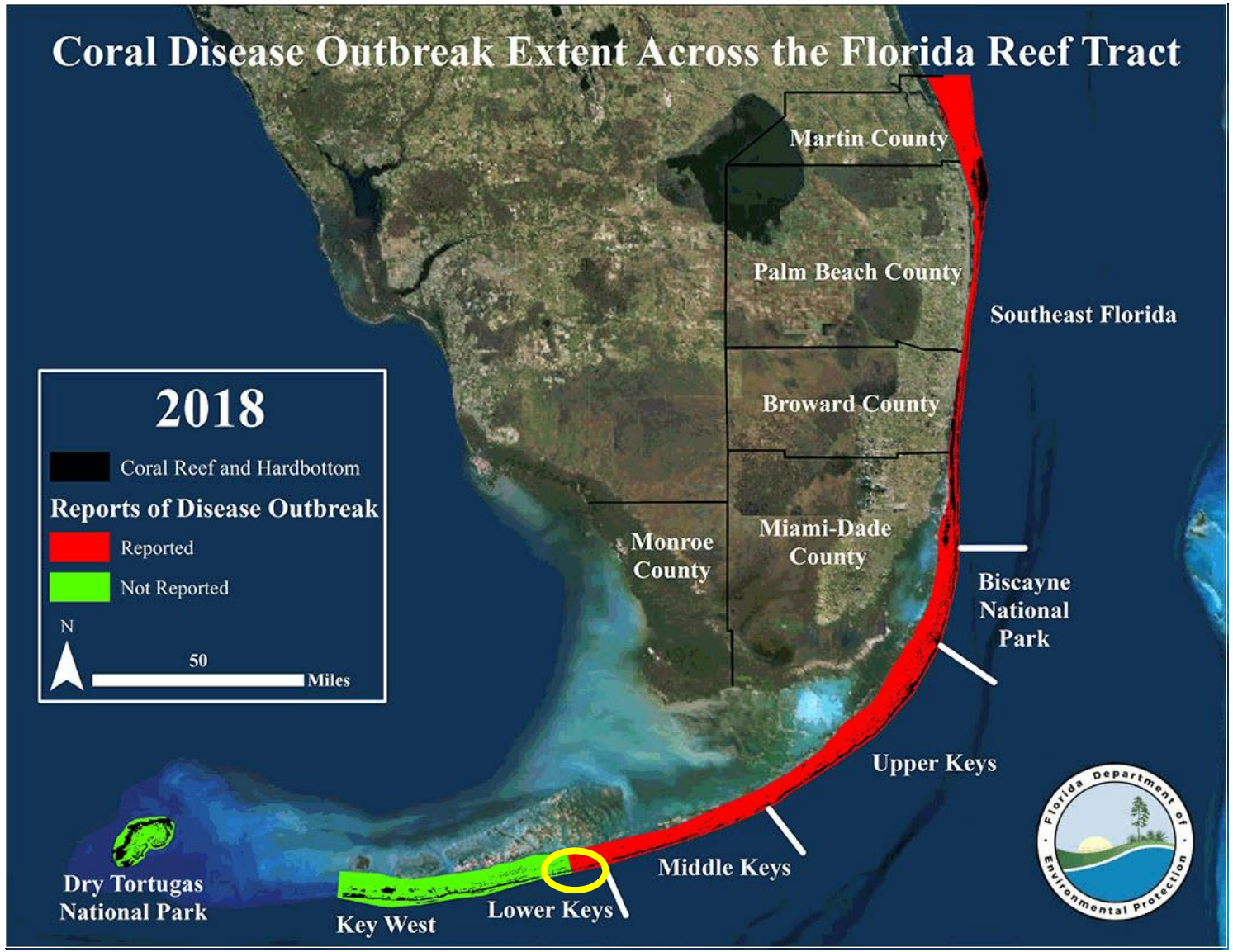
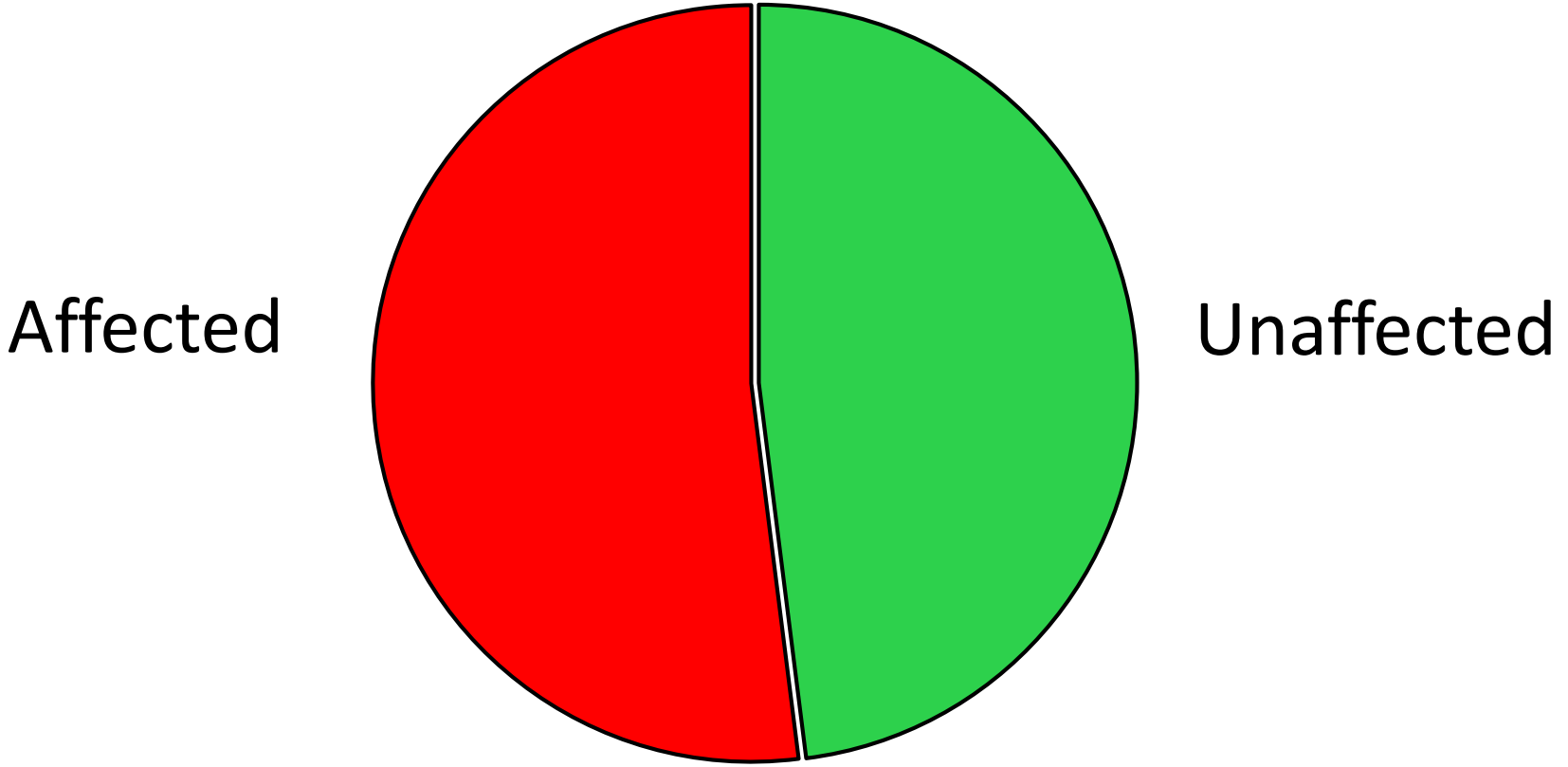


Florida's Coral Disease Outbreak

More than half of Florida's reef-building coral species are affected



Florida's Coral Disease Outbreak

Florida's "Normal" Prevalence of Disease:

2-3%

Florida's Coral Disease Outbreak

Very High Prevalence of Disease (in certain species) :

66-100%

Florida's Coral Disease Outbreak

Progresses Rapidly

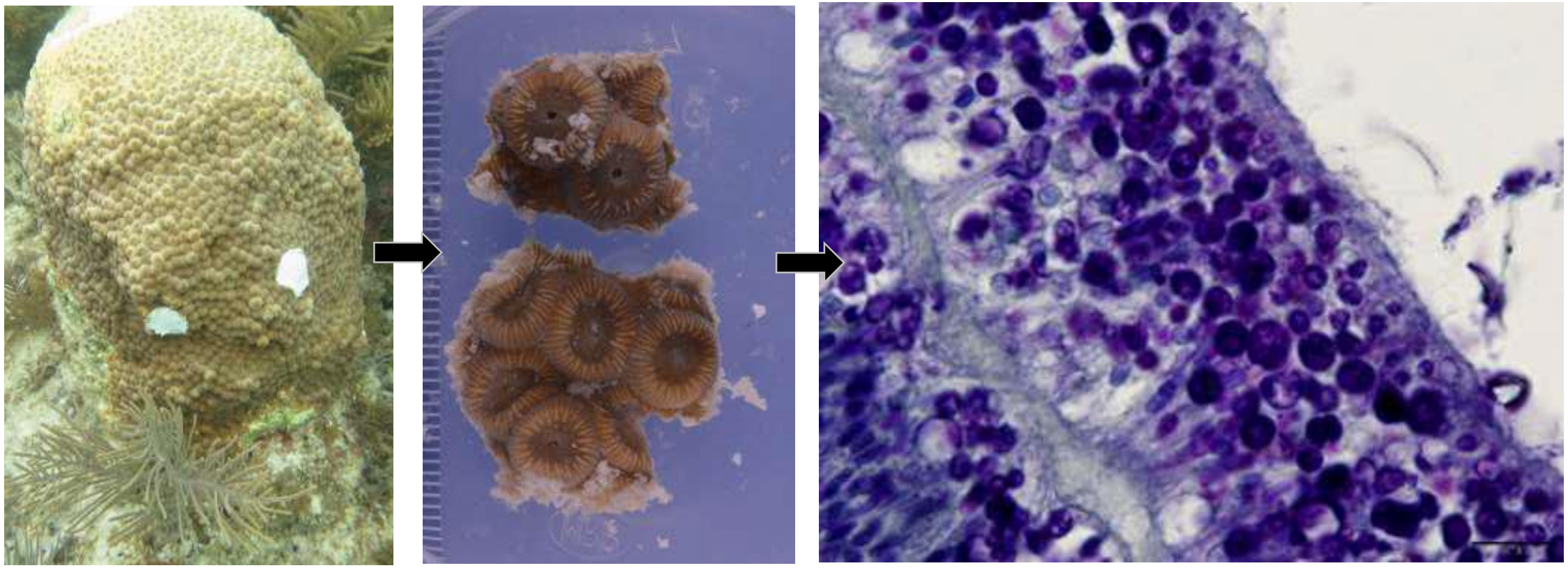
Florida's Coral Disease Outbreak

Disease Response Partners

Coordinated Multi-faceted Response Effort

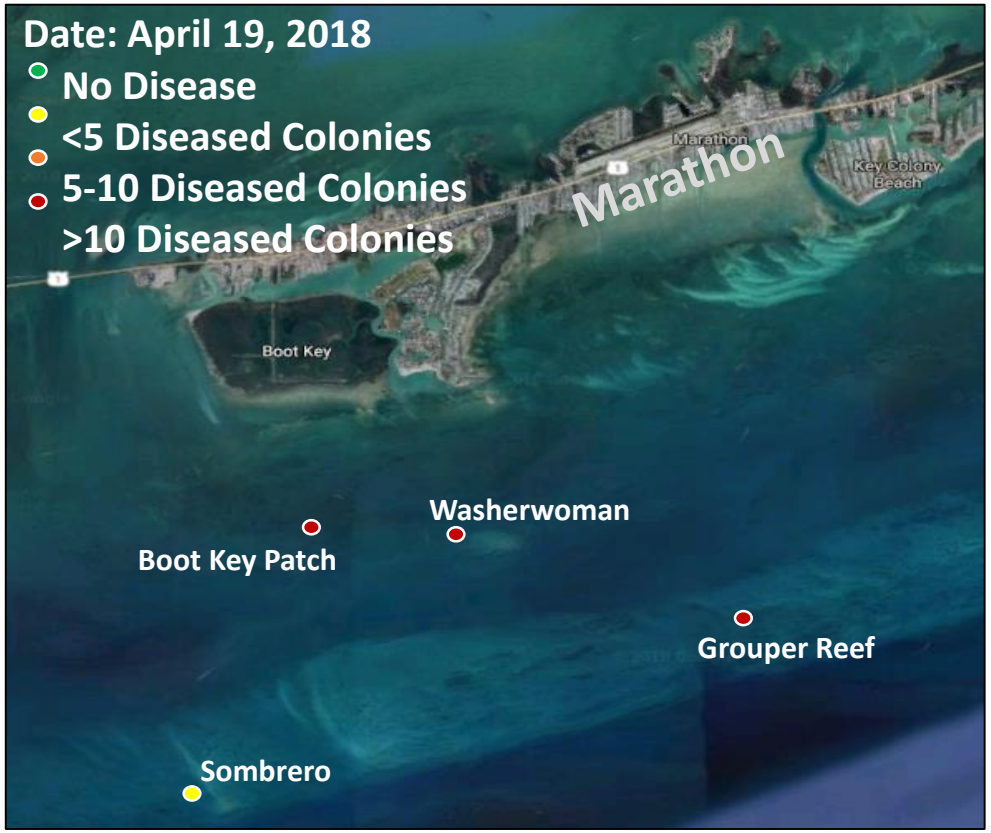
Disease Surveys & Monitoring

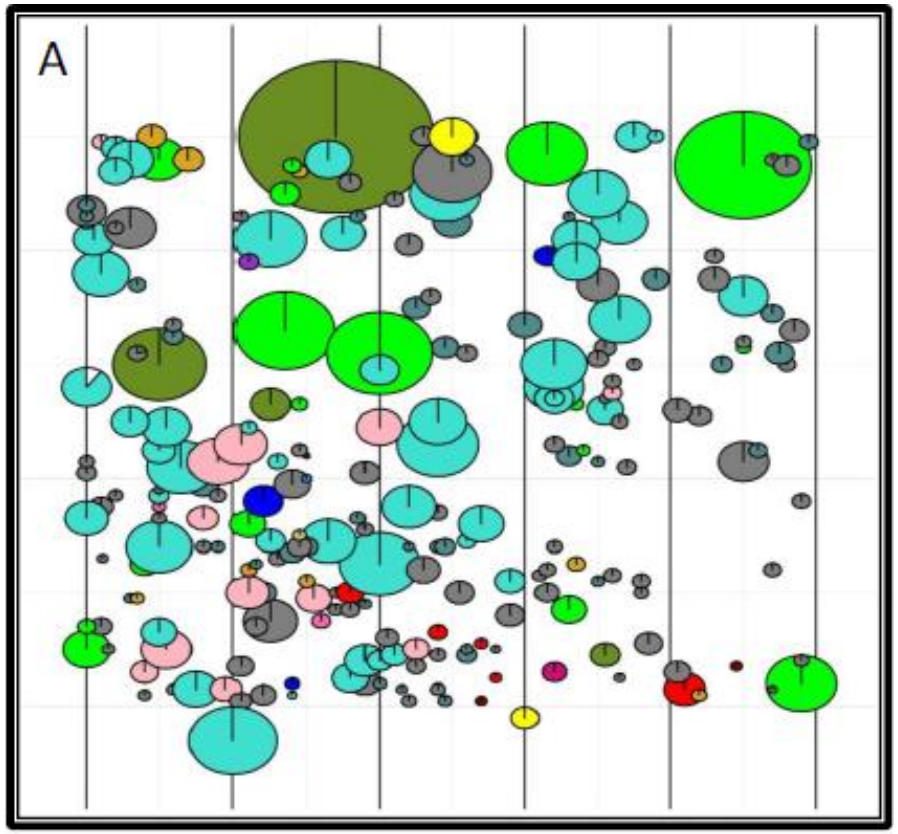
Identify potential pathogens and characterize the disease(s)



Disease Surveys & Monitoring

Document the distribution, prevalence, severity and impacts associated with the disease





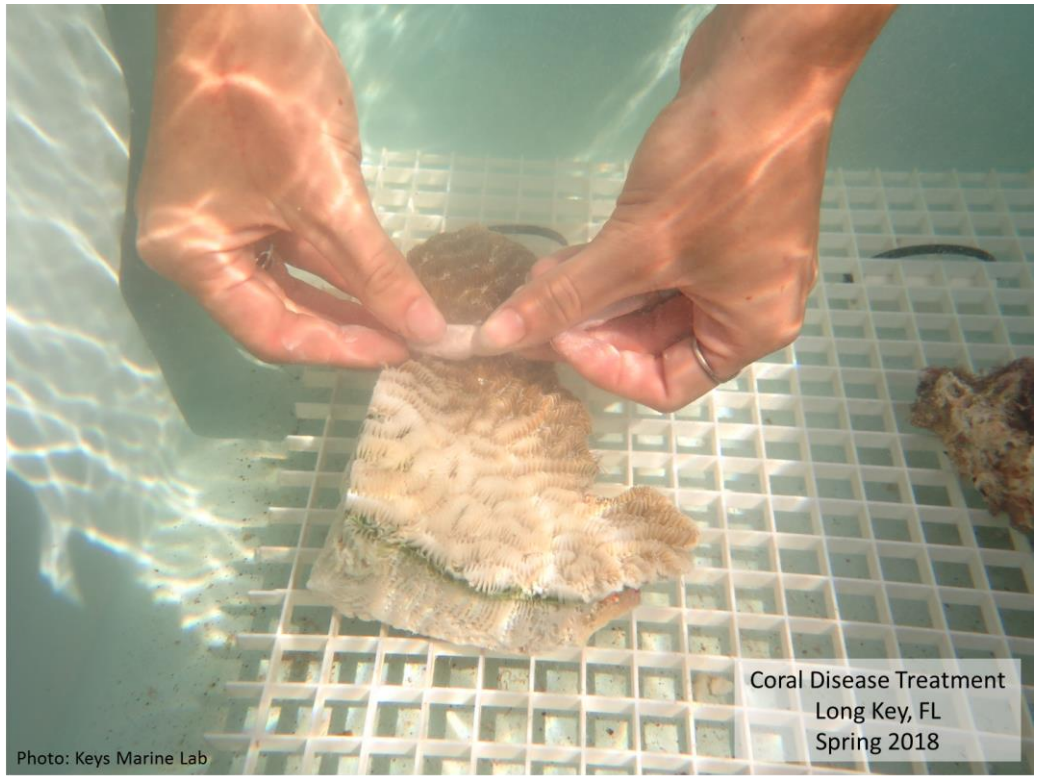
Disease Response Update

Since June 2018

Wrap up of FY17 DEP-funded projects

Over $500,000 in coral disease projects completed, including:

- Surveillance and monitoring efforts
- Spatial epidemiological modeling
- Lab-based treatment trials
- Sample collection
- Pathogen isolation experiments



Coral Disease Treatment
Long Key, FL
Spring 2018

www.floridadep.gov/fco/coral/content/florida-reef-tract-coral-disease-outbreak

(Google: FDEP Coral Disease)

Disease Response Update

Since June 2018

3-Day Coral Disease Technical Workshop:

- Intervention action framework for adaptive decision making
- Coral ‘rescue’ actions
- Monitoring and research priorities
- Outplanting/restoration trials
- Opportunities for community engagement
- **Recommendations for response capacity & ecosystem resilience**

July Workshop Participants. Photo: FDEP

Disease Response Update

Since June 2018

Coral Disease Tourism and Local Business Briefing:

- Coral disease messaging and communications opportunities
- Engagement of local business and tourism leaders
- **Recommendation to develop a statewide call to action campaign for Florida's coral reefs**

July Meeting Participants. Photo: Martin County

What's Next?

Continue coral disease communication

SEAFAN
Southeast Florida Action Network
We're All Connected ~ Keep It Protected

www.SEAFAN.net

NOAA
National Marine Sanctuaries

Florida Keys National Marine Sanctuary
National Marine Sanctuaries | National Oceanic & Atmospheric Administration

www.floridakeys.noaa.gov/coral-disease

What's Next?

Continue coral disease investigation

Continuing Disease Response

In FY18, DEP is funding $2+ million in additional coral disease projects, including:

- In-water disease intervention action trials
- Continuing lab-based intervention tool development
- Pathogen isolation and investigation of potential probiotics
- Genetic preservation – coral spawning assistance

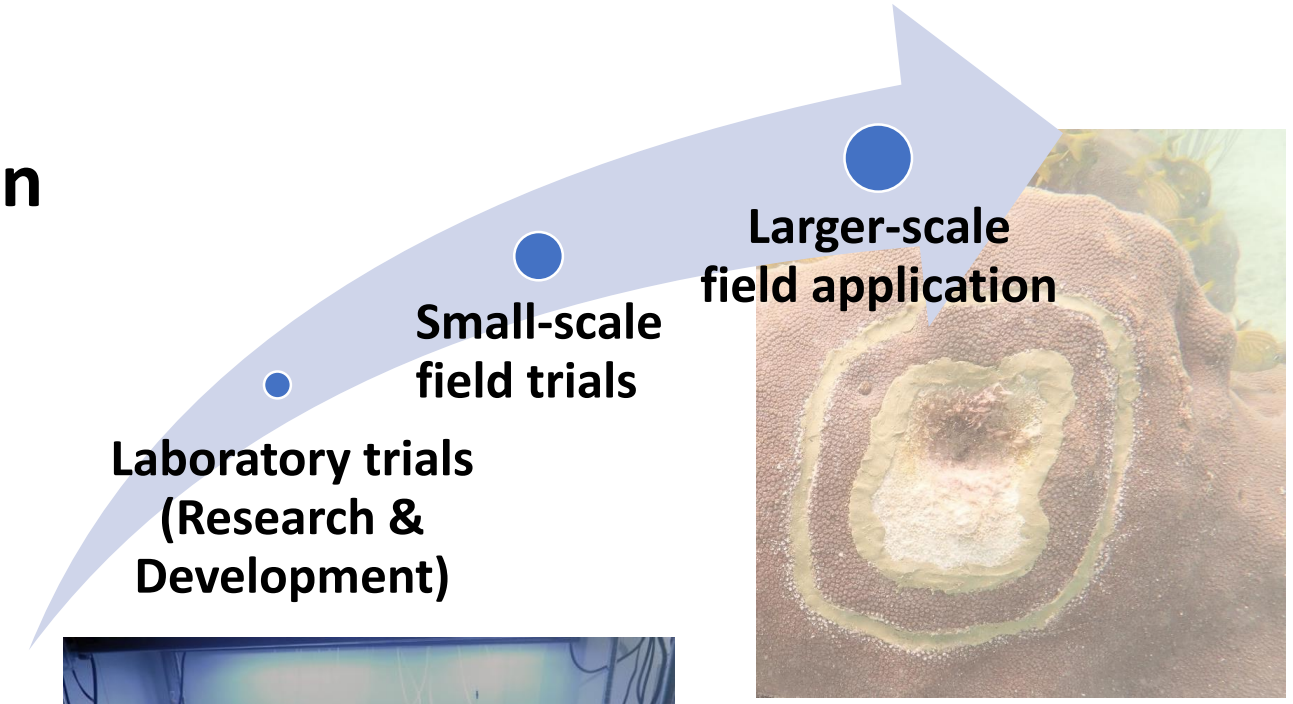
Diver applying in-situ disease intervention. Photo: NSU

Continuing Disease Response

In FY18, DEP is funding $2+ million in additional coral disease projects, including:

Coming Soon:

- In-water disease intervention and coral rescue Strike Teams
- Land-based infrastructure support for rescued wild corals
- Outplanting/Restoration Trials



NSU NOVA SOUTHEASTERN UNIVERSITY

FORE BLUE

Protecting Florida's Coral Reefs

Short Term:

Enhance Disease Response Capacity

=

Triage

Long-term:

Address Environmental Enabling Conditions

=

Restore Ecosystem Resilience

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